

# **SYSTEM AND METHOD FOR ADAPTIVE DUTY CYCLE OPTIMIZATION**

## **ABSTRACT OF THE DISCLOSURE**

A system and method for configuring a receiver such that the duty cycle of the receiver clock accurately matches the duty cycle of the data signal received. This adaptive system and method calibrates a receiver's duty cycle to optimize the receiver timing margin for different data signal types and different slave devices. In one embodiment, a duty cycle correction circuit matches the receiver clock to a predetermined duty cycle. The receiver clock is then configured to have a duty cycle skewed from the predetermined duty cycle based on the specific data signal received. In a receiver system utilizing a clock tree, individual branches of the clock tree are configured to have respective duty cycles skewed to match the duty cycle of a data signal received from a specific transmitting device.